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HOPE COLLEGE

Alumni Magazine

JANUARY • 1960



Application of Faith in Space — Inside Cover
Space Applications for Rocket Vehicles — Page 13

Harvey Proctor

HOPE COLLEGE Alumni Magazine

Volume 13, No. 1

January, 1960

Member of the American Alumni Council

HOPE COLLEGE HOLLAND, MICHIGAN

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Cover: FAITH THAT AMERICANS LIVE BY. With man on the threshold of space exploration, I cornered one of America's leading space scientists in a Buffalo hotel and asked him if faith would be significant to the first space man.

"It will be important to him," said Dr. Everett T. Wolmers, who is assistant to the president of Ball Aircraft for long range planning, and director of the Research Center, "because in the loneliness of space he will know he is not alone."

There is no contradiction, he went on, between religion and science.

"One of the first commandments of the Bible is that man should take dominion over and conquer the earth. Man is expected to understand and control it. Science helps towards that end."

As for his own faith, Dr. Wolmers asserted, "It's been a natural part of my life since childhood."

On Sundays, he teaches the men's Bible class in Central Presbyterian Church. He has been an elder, a Sunday school superintendent, president of the presbytery council. Also he is a vice president of the New York Synod Council of Presbyterian Men.

"I feel I'm accomplishing as much on Sunday morning," he commented, "as any other day. Accomplishments in the field of religion are as real as in the field of science."

The Power of Faith cartoons by Howard Brodie are syndicated by Associated Press Feature Service. This one concerning Hope's Everett Wolmers '32 had wide circulation in 1959. The Alumni Magazine picked it up from the Saginaw News.



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Marian A. Stryker '31, Editor

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1959 Summer School students stroll with Director Dr. Fried in front of the Burg Theatre in Vienna. Front row, left to right: Mary Hoffmyer, John Gilmore, Ann Wiegerink, Dr. Fried. Back row: Charles Lemmen, Joyce Vander Kolk.

Hope Promotes World Understanding

BY PAUL G. FRIED, Ph.D.

"This is a shrinking world and we must learn to be at home in it." This was the thought Dr. Wyckoff expressed in 1866 in his charge to the newly installed first president of Hope College. Today this charge embodies one of the most urgent responsibilities of Hope College. The world has indeed been shrinking in these past hundred years. Improved communications have made it possible for us to reach almost any part of this globe in just a few hours and to become eyewitnesses to a revolt in Tibet, a riot in South Africa, or an election in Europe by merely turning a dial.

While this shrinking of the world has not brought us much closer to the "One World" for which we all hope and pray, it has made it essential for us to provide our students with an intelligent understanding of international affairs if they are to be prepared to face the world of tomorrow and to be at home in it. To meet this intensified

challenge, Hope College has, since the end of World War II, taken a number of significant steps which affect the curriculum, the faculty, and the extracurricular program of the college.

Change in Curriculum

The first area in which there has been a marked expansion of the concern for world affairs is the curriculum. Hope College has, of course, always offered courses in the history, geography, economics and languages of the major European countries which have helped students to a better understanding of these areas. To these have been added, since 1945, many courses designed to meet the new need of students to know the non-western world. New courses include, Far Eastern history, Russian history, African history, and Contemporary Problems of the Middle East, as well as American Foreign Policy, International Organization, International Trade, Social Anthropology, Non-Christian Religions, and

Methods of Teaching Modern Language.

This last course points to a significant innovation which has fundamentally changed the method, though not the purpose of language instruction at Hope College. Through the Language Laboratory students have the opportunity to develop their ability to speak and understand, orally, the language they are studying. Students who listen to tape recordings prepared by native speakers and have practice in recording their own voices, find language study easier and more challenging than ever before when they discover that they can actually communicate in a foreign tongue. Parallel with this increased emphasis on the spoken word in the college is the program of language instruction in the elementary grades which Hope College pioneered in Holland.

This change in the approach to language teaching is perhaps more easily understood in the light of the fact that all eight professors teaching in the modern

"This is a shrinking world..."

language departments have spent extended periods in areas where the language they teach is spoken. Dr. Brown has made more than half a dozen trips to Mexico, Spain, and other parts of Europe; Dr. Ellert studied in Germany and recently spent a year there as a Fulbright scholar and lecturer; Mr. Gearhart has lived in Germany, studied in Austria under a Fulbright grant, and did further graduate work at the University of Munich last summer; Miss Meyer and Mrs. Prins have spent more summers in France than they care to tell; Mrs. Snow took courses at the University of Vienna and spent two summers in Austria; Dr. Megow and Mrs. Feyt were both born in Europe and are teaching their native tongues.

International Experience of Faculty

A brief survey of the large number of Hope College faculty members from other departments who have lived, studied, taught, and traveled abroad will quickly indicate why it has been possible to give real academic weight to courses which prepare students to be at home in this shrinking world.

Dr. Lubbers, Mr. Vanderborgh, and Mrs. De Wolfe spent several years in India as teachers; Dr. Hollenbach served as dean of the American University in Cairo for two years; Dr. Zsiros was president of a Reformed Church college in Hungary before coming to the United States; Dr. Schrier spent two years in Japan and Korea on the teaching staff of the University of California; Dr. Van Putten lived and worked in China, Korea, Formosa, and other parts of Asia for many years; Dr. Kruihof spent two years in Scotland, earning his doctorate at the University of Edinburgh; Miss Hollemann studied in Europe for a year on a fellowship given by the American Association of University Women and Mr. Koiker was a student of George Enescu in Paris. (Ed. note: Paul Fried himself holds his doctorate from a German University and has served as instructor in the European program of the University of Maryland, and since coming to Hope College, has spent two summers as guest professor at Mexico City College. In the past fifteen years he has crossed the Atlantic fourteen times.)

Other members of the faculty including, Miss Bailey, Dr. De Graaf, Dean Hinga, Mr. Jeckel, Dr. Kleinheksel, Dr. Nyberg, Miss Prothero, Dean Reeverts,

Dr. Rider, Dr. Talbert and Mrs. Schoon have spent one or more summers abroad attending foreign universities, doing research, or traveling. Still another group of faculty members gained their foreign experience while serving in the US armed forces in Europe or the Far East.

Extracurricular Stimulation

The extracurricular program of the college is the third avenue through which interest in world affairs has been stimulated among Hope students. The International Relations Club, founded immediately after the Second World War by students who felt the urgent need for an organization to promote world understanding on our own campus has made a major contribution to the new climate of world wide interest at Hope College. The bi-weekly meetings of the IRC open to members and non-members alike, are designed to provide students with an opportunity to examine contemporary world problems.



Dr. Paul G. Fried

During the past few years the Club has generally focused its programs around a central issue for the whole semester. Topics chosen in the past year were "Opportunities in International Organizations," and "Approaches to Intercultural Understandings." For the current year the students have decided to examine various aspects of "The Marxist Experi-

ment." In the course of these programs a considerable number of distinguished guest speakers have been brought to Hope College to address the club and a number of all-college assemblies.

Some of the experts on international affairs who visited Hope College during the past year included: Lt. Col. Vernon A. Walters, US member of the NATO Standing Group in Washington and President Eisenhower's personal interpreter; Mr. Ragnar Sem, Chairman of the Young Liberal Party of Norway; Mr. Harold Graves, Director of Public Information Representative of the European Coal and Steel Community in Washington; Rev. William J. Cook, Field Secretary of the Church Peace Union; Dr. Carl Compton, President Emeritus of Anatolia College in Greece; Mr. Martin Hutton, editor of the *Malay Mail*; and Dr. Wilhelm Schlag, Cultural Affairs Officer of the Austrian Consulate General in New York.

The intellectual stimulation provided by prominent guest speakers who can be questioned by the students is, of course, of prime importance. Equally important, however, is the participation of the students themselves in discussion panels and their willingness to devote their free time to the study of background material for the meetings. During the current semester, for example, some thirty members of the IRC subscribed to the three issues of *Current History* which deal with various aspects of Marxism and the Russo-American contest for world leadership.

Participation On National Scale

The participation of Hope students in programs dealing with world affairs is by no means limited to the activities on our campus. In an ever increasing measure Hope College has been represented at world affairs conferences on the state, regional and national level. For the past six years Hope has been the host for an annual conference of Western Michigan IRC's and two years ago the Midwestern Regional IRC Conference met on our campus. Other conferences regularly attended by our students include: the meeting of the Michigan Council for UNESCO in Ann Arbor; the annual Freedom Forum held at Albion College; The Little United Nations Assembly sponsored by the University of Indiana; the world affairs conference arranged every April by the Principia College in Illinois; and the

Hope prepares through new courses...

a travelled faculty...

national conventions of the Association of International Relations Clubs.

Participation in off-campus conferences on international affairs helps our students in learning to be at home in a shrinking world by providing the opportunity for meetings with statesmen from all parts of the world and with a variety of students of differing backgrounds. Hope students have been assigned an active part in almost all of the meetings listed above. In many cases this required a good deal of prior study and the preparation of papers or reports. Whatever form the student's participation in a conference takes, he generally returns to his own campus enriched himself and eager to share his newly acquired knowledge and enthusiasm.

Attendance of delegations from the Hope College International Relations Club at the National meetings has had two other very gratifying results. In the past three years the Hope club has twice been awarded the \$200 second prize in the national program contest, and was named winner of the \$500 first place, once. At the same time, members of the Hope IRC have repeatedly been chosen to take part in national radio or television programs or to attend special seminars. During the past year, Ronald Chandler received a scholarship to attend a week long seminar of the Church Peace Union in Chicago, Thomas Nowotny was selected for participation in a six weeks summer conference on International Affairs and John Tysse spent two weeks in Norway as guest of the Norwegian government representing the United States in a NATO youth seminar.

Foreign Students On Our Campus

The fourth principal means by which Hope College is helping to promote better world understanding is by bringing the student into direct contact with young people from many parts of the world. Hope College has, of course, always provided a number of scholarships for students from abroad. Thus the presence of forty-three students from eighteen foreign countries on our campus last year was not a new departure but primarily a sign of our expanded concern in this area. What is more significant than the total number is the fact that included in this group were two students who had come to the college with scholarships raised by students of Hope College.

The Hungarian Revolt four years ago served as a dramatic reminder to students everywhere that "talking about" world understanding is not enough to assure peace. Feeling the need for "doing something" about the plight of the Hungarians, the Hope students decided to raise enough money to bring one Hungarian student to the college. The project found the enthusiastic support of the student body and many friends and ended with the arrival of five young Hungarians on our campus two months later. In the meantime the IRC has sponsored several other projects which have provided a \$1200 scholarship last year for an Austrian student to attend Hope College, and six smaller scholarships for our own students who wanted to study abroad during the summer.

The contribution which our foreign students and returning "ambassadors" can make to the student's understanding of the world around us is most significant. Courses in the history of the Far East, Middle East, Latin America, or Western Europe take on added meaning and reality through contact with those who have lived there and can discuss the problems of the area on the basis of first hand experience. Students from countries where French, German, or Spanish is spoken have, in addition, contributed much to our modern language program.

Our Ambassadors Report

Of equal importance to the role of the foreign student on our campus is that played by the young American who has lived abroad and is able to give an intelligent report on his experiences when he

1959 Vienna Summer School students and Mr. and Mrs. Hingo, dressed to go through a 3,000 year old salt mine in Hallein, Austria. Front row, left to right: Mr. Hingo, Larry Hoevy (St. Olaf), James Vander Linde, Dick Hertel. Back row: Mrs. Hingo, Joyce Vander Kolk, Janet Owen, Judy Tysse, Anne Wiegerink, Loretta Plassche, Chris Vanden Berg (Calvin).



an International Relations Club...

foreign students on campus...

returns to our campus. Throughout the history of Hope College the sons and daughters of our missionaries have helped our students in this respect. A significant addition to this group came after 1945 when a large number of former Hope students who had served in all parts of the world during the war returned to the college. Many of these young men had made friends abroad, some of them even brought home "war brides," and all were aware of the urgent need for better understanding among nations. Their own experience had turned them into effective ambassadors of peace.

During the past nine years Hope College had also sent out and watched the return of another group of Ambassadors. The Community Ambassador program, begun in 1949 under the leadership of Dr. Brown and Dr. Hawkinson, has enabled a succession of our students to become part of a family in various areas of the world for a summer. Since the first "Community Ambassador" went to Yugoslavia in 1951, Hope College students have gone to Germany, Austria, France, Spain, England, Italy, Chile, and Brazil. Each one who returned has not only added to our knowledge about the area on which he reported but has given us a more sympathetic understanding and human appreciation of our neighbors around the world.

Students Go Abroad To Learn

Perhaps the most direct way in which the student can learn to be at home in this shrinking world is by living and studying abroad. During the past few years a number of Hope students have been enrolled in summer courses or for regular sessions at foreign universities like Mexico City College, the Institute of European Studies, Edinburgh University or the University of Munich. At the same time the college's participation in the Washington Semester plan at the American University has enabled Hope students to acquire a first-hand understanding of American foreign policy in the making. Unfortunately, these opportunities for study abroad or in Washington have been available only to a few students.

The development of Hope College's own foreign study program has therefore been of major importance. Like many other American institutions, Hope College initially responded to the postwar

student interest in supervised study and travel by providing the European tour program begun by Dr. Brown in 1949. After a few years, however, it became apparent that this program was too limited to meet the different needs of all the students interested in broadening their international understanding in many fields besides languages.

The Vienna Summer School

With the establishment of the Hope College Vienna Summer School, on an experimental basis in 1956 and in its present form in 1957, Hope College pioneered the development of a program which combines the most important aspects of European travel, study, and living. The main features of this program are: an extended study tour which introduces students to Europe, both old and new; six weeks of residence with an Austrian family during the regular academic summer session; and a period of free travel time when the student can explore Europe on his own.

The unique part of the Hope College program in Vienna is that it combines the objectives of international living and cultural immersion with a broad and intensive academic program designed to meet the specific needs of our students. In 1956, when the Hope group spent part of the summer in Austria, students could enroll in one of two courses. Four years later, by the summer of 1959, the enrollment had grown from fourteen to sixty-one students (thirty-two from Hope College and twenty-nine from eighteen other colleges and universities) and students had had a choice of nine different courses including art, German, history, literature, and music. The European faculty for the past summer included seven full-time instructors, two tutors, and one regular guest lecturer in art history.

In the four years since its inception, the Hope College Vienna Summer School has enjoyed a growing reputation in the United States and in Europe. Last summer Oberlin College established a program similar to ours in Vienna and currently Wooster College is exploring possibilities of also following Hope's lead. In Vienna, Hope College has enjoyed the most cordial support of Austrian and American officials. In the past two years students have been welcomed in Austria

by the president of the Austrian National Assembly and by the Austrian Foreign Minister. Last summer the arrival of our group was noted by four Vienna daily newspapers, by the radio, and in a television program called "Welcome to Vienna."

During these three months in Europe our students gain many new impressions and insights. They are exposed to different points of view and forced to take a new approach to old problems. In the process these young Americans grow to understand and appreciate the values of a different culture and come to see their own responsibility in the shaping of international relations in the future. But perhaps the most significant result of this new experiment in international living which Hope College has developed during the past few years has been the effect which this summer program has had on our own campus. It has increased interest in the study of languages, history, art, literature, and music. More important still, the Vienna Summer School has given our students a new and more profound appreciation of their own country and institutions, it has stimulated their concern for international understanding and it has taught them that they can indeed be at home in this shrinking world.

There are, of course, numerous other ways in which Hope College can and does contribute to the continuing process of preparing students to become citizens of the world. The college has always been conscious of its responsibility in this field and the achievements of Hope alumni around the world prove that these efforts have borne fruit in the past. What the foregoing account indicates, however, is that the past few years have seen a remarkable intensification of concern in this area by faculty and students alike. Through the expansion of the college curriculum, the revitalized language program, the increased interest and training of the faculty, the availability of stimulating extracurricular activities, and the opportunity for study abroad and the immersion of a foreign culture, Hope College provides its students with the kind of academic and social climate which helps them to be at home in this shrinking planet and prepares them to face the world of tomorrow.

the Vienna Summer School

FOURTH, THIRD, SECOND GENERATION STUDENTS

The names of first, second, third, fourth generation students have not been published in the Alumni Magazine since January and July of 1958. We are, therefore, presenting the names of those who have been admitted since the last published list.

There is one fourth generation student on the campus this year. She is Jane K. Zwemer whose father, Raymond L. Zwemer was graduated in 1925; her grandfather, Samuel M. Zwemer, in 1887; and her great grandfather, Adam Zwemer, from the Hope Academy in 1857.

There are seven third generation students: Carol Buteyn, Kalanazoo, daughter of John Buteyn '36 and granddaughter of the late Peter Buteyn, Prep. '12N; Sharon Cook, Wilmington, daughter of Gordon '37 and Kathryn Rotschafner '35 Cook, and granddaughter of the late William Rotschafner '05; Leona Kots, Roseland, Minn., daughter of George T. '23 and Dena Klostner '28 Kots, and granddaughter of the late Pop Klostner '27 Kots; William Kots, '96N; James H. Mulder, Ridgewood, N.J., son of Johan Mulder '29, grandson of the late John Ter Avest '99; Grace and Elizabeth Oosterhof, Holland, daughters of Willis M. Oosterhof '28 and granddaughters of the late Albert Oosterhof '92; Barbara A. Walvoord, daughter of Christian '34 and Marie Verduin '34 Walvoord and granddaughter of the late William Walvoord '08.

The 120 second generation students are: Myrna E. Aalberts, Hudsonville, (Gradus A. '34); and Gertrude Beltman '34 Aalberts; Abba Anter, Eastchester, N.Y., (Abraham Anter '31); Barbara Bloemers, Chicago, (Harms '31 and Vera Holle '34 Bloemers); David Bonnette, Holland (Gleason '39 and Henrietta East '38 Bonnette); William J. Borgman, Vicksburg, Mich., (Irwin Borgman '23); William Bouman, Holland, (William E. Bouman '33); Ruth Benken, Glen Rock, N.J., (Henry '27 and Hester '27 Benken); Bruce Brink, Hamilton, (John Brink, Jr. '30); David Brower, Ridgewood, N.J., (Bert '23 and Susanna Hamelin '22 Brower); John T. Brunson, Sturgis, (Allen '33 and Margaret Steketee '35 Brunson); Donna Burggraaf, E. Orange, N.J., (Nicholas J. Burggraaf '31); John Burggraaf, Dumont, N.J., (Henry '27 and Ruth Hardie '28 Burggraaf); Ekbal Buys, Grand Rapids, (Ekbal '37 and Hermina Becker '36 Buys); Ralph B. Cook, Grose Pointe Shores, (George Cook '24); Karen Coster, Lyndonville, N.Y., (Lloyd R. Coster '35); James W. Cotts, Holland, (Eleonor Wollman Cotts); Julia Dalman, Holland, (Andrew '34 and Lillian Mulder '35 Dalman); Mary Ellen Dalman, Holland (LaVerne C. Dalman '28); Paul Dalman, Greenville, (Howard '32 and Evelyn Belhuis '34 Dalman); Bruce De Dree, Grand Rapids, (Clarence '37 and Lucille Buter '38 De Dree); Franklin Deitz, Schenectady, N.Y., (Franklin Deitz '34); Sandra L. De Koning, Rutherford, N.J., (Gerrit J. DeKoning '28); Joan Diephuis, Midland Park, N.J., (Henry Diephuis '28); Carl J. Douma, Grand Rapids, (George C. '36 and Florence Vis '36 Douma); Joyce M. Droppers, Ferrysburg, (Lester G. Droppers '27); Donald W. Dykstra, Holland, (Adolphus '36 and Bernice Mollema '32 Dykstra); Henry Dykstra, Castlewood, S.D., (Rens Dykstra '25); Mary J. Dykstra, Reed City, (Carl Dykstra '28); Clarice Elferdink, Holland, (Bessie Wynna '28 Elferdink); James R. Escher, P.I., (Joseph '35 and Marion Boot '35 Escher); John C. Fisher, Jr., Holland, (John C. '41 and Eunice Robert '41 Fisher); Ruth W. Fikkema, Montrose, N.Y., (John D. Fikkema '31); David Fugazotto, Allison Park,

REPRESENTING HOPE COLLEGE

Lester S. Vander Werf '31 at the inauguration of Asa Smallidge Knowles as President of Northeastern University, September 8, 1959, Boston.

Charles E. Rozema '29 at the inauguration of Brandford Price Millar as President of Portland State College (Oregon), October 18, 1959.

Harold Mackey '43 at the inauguration of Louis Barnes Perry as eighth President of Whitman College, Walla Walla, Wash., October 18, 1959.

Irwin J. Lubbers '17 was the speaker at the inauguration of Dr. Karl A. Olsson as the fifth president of North Park College and Theological Seminary in Chicago, November 5.

Howard D. Hartough '36 at the inauguration of Robert Lee Mills as twentieth president of Georgetown College, Georgetown, Ky., October 16, 1959.

Percy J. Kinkema '25 at the inauguration of Arthur Lewis Knoblauch as sixth president of Western Illinois University, Macomb, November 6, 1959.

Pa., (Paul Fugazotto '35); Jack and Jerry Hamelink, Holland, (Marinus '22 and Edith Damelink '30 Hamelink); William Harms, Holland, (Herman '29 and Marie Kleis '32 Harms); Paul Hesselink, Adams, Neb., (Harold Hesselink '28); Larry K. Heyns, Grand Rapids, (William J. Heyns '34); Sandra Hicks, Caverack, N.Y., (Donald E. Hicks '30); Theodore and Robert Hoekman, Passaic, N.J., (Martin Hoekman '35); Lois B. Hollander, Sioux Center, Ia., (Priscilla Vermeer Hollander '28); Kenneth W. Holleman, Grandville, (Paul W. Holleman '38); Patricia Hower, Holland, (Letitia Hower '44); Stephen C. Howlett, Valencia, Pa., (Margaret Beach '31); Howard Bos Hughes, River Forest, Ill., (Wilhelmina Bos Hughes '26 and the late William B. Hughes '29); Paul W. Hyink, Kohler, Wis., (Kenneth J. Hyink '29); Beverly E. Joekel, Pompton Lakes, N.J., (Stanley '36 and Fern Corteville '38 Joekel); Reuben Kamper, Spring Lake, (Russell Kamper '29); Robert O. Klebe, Yonkers, N.Y., (Mary Waldron Klebe '29); Paul Kleinhessel, Holland, (Henry Kleinhessel '36); David J. Kleis, Holland, (Russell '28 and Alice Huma '28 Kleis); Betsy Ann Kruizenga, Hamburg, N.Y., (Robert E. '34 and Ruth Mulder '34 Kruizenga); Elizabeth Kruizenga, Carpinteria, Cal., (Eldred C. Kruizenga '18); Mary E. Kuiper, Holland, (Alma Cook Kuiper '33); Judith A. Louwenaar, E. Orange, N.J., (Marguerite Oudemool '33); Stanley T. Marcus, Holland, (Clifford '39 and Esther Bultman '39 Marcus); David Maris, Holland, (C. Woodrow Maris '36); Louise Marslie, Holland, (Herbert Marslie '33); David H. Masselink, Holland, (Henry D. Masselink '28); Marcia Meengs, Waupun, Wis., (Chester '32 and Gertrude Holleman '34 Meengs); Margo Meengs, Holland, (William J. Meengs '27); Douglas Neckers, Clymer, N.Y., (Carlyle '35 and Doris Van Lente '36 Neckers); Judy A. Nienhuis, Holland, (Josephine Kaper '35 Nienhuis); Nancy Nienhuis, Holland, (Arthur L. Nienhuis '32); John Nonhof, Lansing (Garret Nonhof '30); Chris-

tine H. Nykamip, Zeeland, (Russell R. Nykamip '26); Wesley Nykamip, Holland, Esther Brink Nykamip '29); Keith Nykerk, Jenison, Mich., (Glen '31 and Dorothy Schipper '31 Nykerk); Sarah K. Olert, Kansas City, Mo., Frederick H. '26 and Sarah K. Olert '31 Olert); J. Tom Oosting, Kettering, O., (Melvin '31 and Julia Van Oss '30 Oosting); Patricia A. Pelon, New York, N.Y., (John F. Pelon '52); John J. Piet, Vellous, S. Ind., (John H. '36 and Wilma Vander Wendy '35 Piet); Ronald L. Plasmann, Zeeland, (Gerald J. Plasmann '35); John Pleune, Saginaw, (Russell E. Pleune '25); Grace M. Poppink, Hillsdale, (William A. Poppink '37); Eric W. Pott, Grand Rapids, (Abraham L. '27 and Anne Butz '31 Pott); Lynn Prakkien, Ann Arbor, (Nicholas and Jerine Koning, both '29, Prakkien); Charles A. Prins, Holland, (Eugene L. Prins '36); Theodore Reenders, Grand Haven, (Theresa Ruster Reenders '38); Carolyn Ringenold, Hull, Ia., (Harold '34 and Dorothea Van Saun '33 Ringenold); Ronald, Dorian F., and Sharon J. Schaap, Grand Rapids, (Theodore Schaap '32); Thomas V. Schade, Pearl River, N.Y., (Howard C. Schade '32); Jane and Margie Schaffenaar, '42 Schaffenaar); Dale L. Scheerhorn, Grandville, (LaVerne H. '38 and Hildegard Bos '37 Scheerhorn); Lewis R. Scudder, Arabia, (Lewis Scudder '31); Steven Slagh, Saranac, (Milton Slagh '34); Phyllis A. Smith, Holland, (Raymond L. '28 and Mabel Moeke '28 Smith); Betsy M. Snyder, Cobleskill, N.Y., (the late Maurice '36 and Anne Frissel '36 Snyder); Marcia K. Span, Grand Rapids, (Milton C. Span '36); Paul and Edna Sweet, Okla. (Edna Leestma Sweet '33); Robert R. Teall, Holland, (Alan F. Teall '40); Nancy L. Tellman, Holland, (Ella Roggen Tellman '33); Joan E. Ten Cate, Holland, (Vernon '27 and Lois De Wolf '30 Ten Cate); Arlen B. Ten Pas, Brandon, Wis., (Doris Rens Ten Pas '40); Jan D. Ter Louw, Brockport, N.Y., (Adrian L. '28 and Elizabeth Moir '27 Ter Louw); Donald S. Te Roller, St. Louis, E. '35 and Gene and Jan Kolken '36 Te Roller); John Teusink, Cedar Springs, (J. H. Teusink '25); Barbara L. Timmers, Grand Rapids, (Adeleide Dethmers Timmers '34); James G. Tyse, Lyndhurst, O., (James W. '34 and Arloa Van Peursem '33 Tyse); Sarah Vande Poot, Holland, (Russell Vande Poot '26); Sharon J. Van Eerden, Holland, (John '39 and Marie Dalman '37 Van Eerden); Thomas J. Van Kleij, (Lavern '39 and Betty De Pree '41 Van Kleij); Duidith A. Van Leuwen, Holland, (Cornelius J. Van Leuwen '26Pree); Bruce G. Van Leuwen, Holland, (Bruce '33 and Myra Ten Cate '30 Van Leuwen); Craig Van Vessen, Rochester, N.Y., (James E. Van Vessen '33); Thomas and William C. Vandenberg, Holland, (William C. Vandenberg, Jr. '35 and Esther Koster Comptois '34); Bruce Vanden Bosch, Holland, (Mildred Esenberg '34); Sally A. Vanderbeek, Holland, (Bernard E. Vanderbeek '34); James G. Vander Hill, Quakers Village, N.Y., (Laverne J. Vander Hill '29); Henry Van Der Kolk, Hopkins, (Bert Van Der Kolk '23); Nancy Vander Kolk, New Brunswick, N.J., (Justin Vander Kolk '31); Barbara Ver Meer, Hudsonville, (Leona Pecken '37 Ver Meer '35); Lorna J. Vermeer, Grand Rapids, (Henry '37 and Alberta Kouiker '38 Vermeer); Gary W. Ver Strate, Metuchen, N.J., (Harry Ver Strate '31); Gerrit Wolf, Northfield, Ill., (Helen Spritsma Wolf '33); Harold C. Wood, Arlington, Va., (Harold C. Wood '34); Jane A. Woody, Fennville, (Marion Boeks Woodby '38); David M. Wynga, Grand Haven, John '31 and Josephine De Haan '31 Wynga); Judith A. Zwemer, Marquette, (Daniel J. Zwemer '33).



Dr. Bernadine Siebers De Valois
... in Christian Missions



Dr. Calvin Vander Werf
... in Science and
Technology

Dr. William Welmers
... Linguistics

EXPANDING FRONTIER

DR. BADEAU

Hope's Second Academic Homecoming, October 16, 17, 1959, using the theme "Expanding Frontiers in the Space Age" was well received and judged successful by the planning committee.

It has been our desire to publish in the Alumni Magazine the Academic Homecoming papers for the benefit of those who heard them and would like them for reference, and for those who could not attend, but would like to keep up in some areas of scholarly thought, as well as for those who wanted to attend more than one of the sessions which ran simultaneously.

This desire is naturally thwarted by our limited space and our limited number of issues. It is just out of reason to present six or seven papers in one year, when we publish only four issues of the Alumni Magazine.

For this reason, Dr. John W. Hollenbach, chairman of the speaker-theme-program committee has suggested to participants that they permit publication of their papers in technical and professional journals.

Dr. John S. Badeau, President Near East Foundation, the Near East, or with a Near East background. Stamat Muktar, Iraq; Sohrab Khosnevis, Iran; Mortesa Radeau, Abba Antar, New York City; Dr. Hollenbach,





Dr. George Zuidema
... Medicine



Angie Poppen Gebhard
... Racial problems

ERS IN THE SPACE AGE

POLITICAL FRONTIERS

Deafured Speaker, had lunch with Hope students from
ding: Wael Karachy, Waleed Karachy, Jordan; Hik-
jimi, Iran. Seated: Hilda Hadawi, Jordan; Dr. Ba-
Ayra Giesmoe Karachy (Mrs. Waleed).



Dr. Clarence De Graaf, moderator of the symposium by the English staff on *Literature in the Space Age* (Academic Homecoming 1959), has announced the publication of these papers in *The Reformed Journal*, beginning with the December issue. The Reformed Journal is a semi-popular journal dealing with religion, culture and contemporary issues. It is published by the Wm. Eerdmans Publishing Company of Grand Rapids. Alumni who missed the conference may write to the publishers for copies if they so desire.

In the symposium Dr. De Graaf, chairman of the department of English, presented the implications of the scientific revolution for the literary artist and pointed up the contribution art can make to the understanding of life. Dr. John Hollenbach illustrated the predicament as faced by the contemporary dramatist, Professor Henry ten Hoor, as faced by the poet and Professor James Prins, by the novelist. The articles will appear in this order in the successive issues of the journal.

On the Campus

LOOKING AHEAD WITH HOPE

The \$3,000.00 fund-raising program, known as "Looking Ahead with Hope", has now been launched. The first area campaign is being conducted in Holland-Zeeland.

General Chairman of the Holland-Zeeland program is Willis A. Diekema prep '10; special gifts chairman, C. C. Andriessen, Holland and Jack De Witt '32, Zeeland; general gifts co-chairmen, Frank D. Kleinheksel '13 and James De Pree. Over 500 Holland-Zeeland citizens are participating in the active solicitation.

A complete report of the Holland-Zeeland campaign will soon be coming to you from the campaign office.

A representative of Marts & Lundy, Inc., a fund-raising organization of New

merged with the "Looking Ahead with Hope" program for the period of the campaign. All alumni who contribute to the campaign will be counted as having given to the Alumni Fund".

HOPE TO CONDUCT SUMMER INSTITUTE IN MATHEMATICS AND SCIENCE

Hope College has received a grant of \$38,900 from the National Science Foundation to conduct a Summer Institute for High School Science or Mathematics Teachers. Dr. Jay Folkert, Chairman of the Department of Mathematics, will be Director of the Institute; Dr. Harry Frissel, professor of physics, Associate Director. The summer session will begin June 27 and continue through August 5, 1960.

At the final report dinner on December 17 the Looking Ahead with Hope campaign went "over the top" with a total reported of \$341,829, from 995 donors in the Holland-Zeeland area.

York City, is in charge of the campaign office. The local field representative is Mr. Frank J. Coleman who began operations on the campus on September 2.

Before the campaign is completed all areas where we have concentrations of alumni will be organized for solicitation. (Your turn will come!)

At the October 17 meeting of the board of directors of the Alumni Association, action was taken to merge the annual alumni fund with the "Looking Ahead with Hope" program. In order to keep the college budget operating the board voted to take from the total gifts by alumni to the development program, the average of the last three years alumni fund for operating expenses, and otherwise to merge the two funds for the duration of the campaign.

Therefore it is printed in the campaign literature: "The Alumni Fund will be



Dr. Folkert

Stipends will be available to 40 senior high mathematics and science teachers who wish to attend the six-week session.



Dr. Frissel

A maximum of six semester hours of undergraduate credit will be offered which can be applied toward an A.B. degree.

The major objectives of the summer institute are three. The first is to provide instruction in two of the major areas of mathematics and physics that are becoming increasingly important; namely, statistics and electronics. Second, to broaden the outlook of the teacher in his field and improve his capacity for individual study and graduate work. Third, to help the teacher relate his new understandings to the shaping of curriculum and the instructional procedures in his own school, with special emphasis on stimulating the superior student.

High school mathematics curricula have recently been under serious criticism and analysis. Revisions have been urged by such groups as the College Entrance Examination Board. These revisions emphasize that high school mathematics must meet the needs of science for today's world. In keeping with these ideas, the institute will offer two courses in mathematics: "Introduction to Statistics with Applications" and "Topics in Applied Mathematics."

In the field of physics, electronics is one of the most rapidly developing areas, and as such, one in which many high school teachers are not up to date in their understanding. Furthermore, good students are often best inspired when allowed to work on special projects. More and more such projects entail electronics. Thus a good teacher should be well qualified in this area. The institute, consequently, will offer a course in "Fundamental Electronics with Applications."

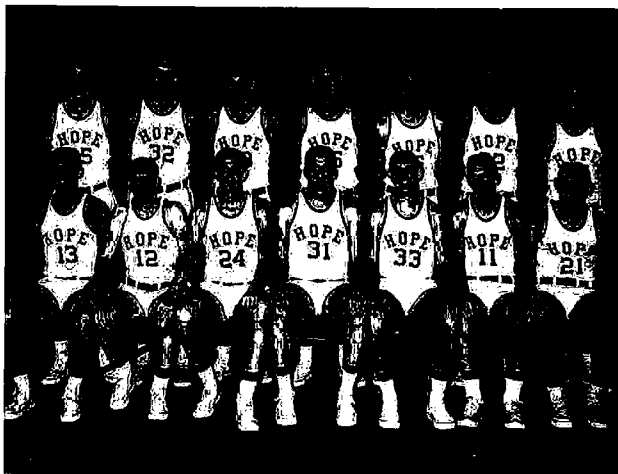
The pattern of the program will be as follows: Twenty mathematics teachers would be enrolled in "Introduction to Statistics with Applications"; twenty physics teachers would be enrolled in "Fundamental Electronics with Applications." All forty would be enrolled in "Topics in Applied Mathematics."

An authority in each of the fields of the courses being taught will be on campus a minimum of two full days. He will lecture for the group in the course itself and will give one general lecture, followed by discussion on Wednesday afternoon, to the whole institute. The fourth lecturer will have a major interest in the content and techniques of teaching high school mathematics and physics.

DR. LUBBERS GIVES MSU ADDRESS

Dr. Irwin J. Lubbers gave the graduation address at Michigan State University early in December.

The 790 Michigan State students who received degrees on this occasion heard Dr. Lubbers speak on "Freedom of the Mind."



Seated—Norm Schul, Bob Reid, Bill Vander Bill, Ray Ritsema, Warren Vander Hill, Daryl Siedentop and Rolland Schut. Standing—Ekdal Buys, Don Boyink, Jim Hulst, Rich Bakker, Jim Vander Hill, John Oosterbaan and Jerry Hasslink.

SPORTS REVIEW

By Gerald J. Kruyf '56

Closing their football season with an overall record of 8-1, the Hope College Flying Dutchmen grabbed second place in the M.I.A.A., suffering only a 35-7 pasting from Hillsdale.

Hope	20	De Pauw	7
	7	Albion	0
	13	Alma	7
	19	Wabash	13
	41	Kalamazoo	6
	20	Adrian	0
	7	Hillsdale	35
	42	Olivet	0
	32	Ohio Northern	6

In basketball, the Orange and Blue is in defense of its MIAA crown for the fourth consecutive year. Graduation captured such standouts as Paul Benes, Darrell Beernink, Al Buursma, and Wayne Vriesman, but Russ De Vette's cagers still boast a fine nucleus in senior

co-captains Ray Ritsema and Warren Vander Hill. Other starting spots are being filled by Sophomore Bob Reid, senior Daryl Siedentop and junior Bill Vanderbilt. Also seeing starting action is Jim Vander Hill, Warren's freshman brother. The other returned lettermen are senior Rolland Schut, and juniors Don Boyink, Rich Bakker, and Norm Schut. Two boys have been promoted from last year's J.V. squad, sophomores Ek Buys and Jerry Hesselink. Two other freshmen seeing a lot of action are John Oosterbaan and Jim Hulst.

Scores of the games till press:

Hope	71	No. Michigan	74
	98	Lakeland	57
	80	Calvin	71
	81	Kalamazoo	66
	99	Adrian	83
	71	Central State	78
	87	Wheaton	85

MUSIC DEPARTMENT NAMED TO NATIONAL ASSOCIATION

The Hope College Music Department was elected to associate membership in the National Association of Schools of Music at the 35th meeting of the association held in Detroit in November.

With this election Hope joins the University of Michigan, Michigan State University, Western Michigan University, Albion College and the Detroit Institute

of Musical Arts as the only Michigan schools in this national accrediting agency.

The curricula approved for the Hope Music department lead to the degrees of Bachelor of Arts in Music Education and Bachelor of Arts in Applied Music. The National Association of Schools of Music is designated by the National Commission of Accreditation as the official accrediting body for music training on the college level.

rs of D WITH HOPE

am

started in the summer of 1960.
ege campus, facing Graves Place.
mined."—President Lubbers.

FEATURES

in the new library," according
who also was consultant for the
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book shelving can be rearranged

continued May, "is that the build-
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oved," said May. "Students will
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SECTION

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gacy the Pilgrim Fathers gained
United States of the Netherlands

themselves, Dr. and Mrs. Ban-
vide books and other literature
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BUILDING

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o a little theater with a seating
of the building which presently
an art studio.

★ ★
the Looking Ahead with Hope
adium, funds for miscellane-
al endowment for faculty



Laboratory and Classroom Building.

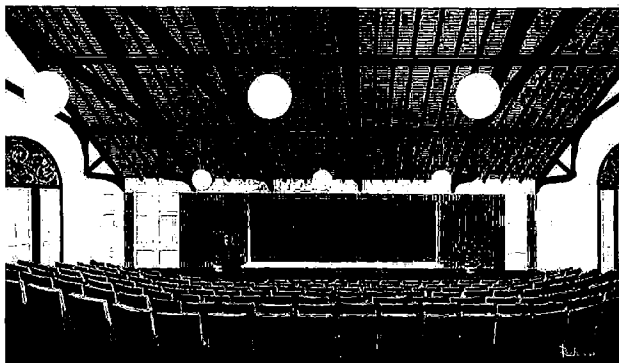
LABORATORY AND CLASS ROOM BUILDING

This laboratory and classroom building will house the Physics Department and provide classroom space and offices for other departments. It will complement the library in style. It will be three stories in height. It will include a large lecture hall off the first floor level. The estimated cost of construction is \$600,000.

In the architect's sketch and plan there is a reflection pool running from the library to the laboratory building to coordinate the two in effect. The plans provide for a walking bridge over the middle of the pool to span its considerable length.

The architect for both buildings is Ralph Calder of Detroit. Mr. Calder is the architect for the new women's dormitory presently being erected on the northeast corner of the campus. He was also the architect for Kollen Hall, completed in 1936, the Music Building completed the same year, Durfee Hall opened in 1950, and the central heating plant constructed the same year.

Graves Hall Auditorium.



1960 VIENNA SUMMER SCHOOL

Details of the 1960 Hope College Vienna Summer School were announced today by Dr. Paul G. Fried, director of the Hope College European program.

The Hope group will leave New York on the *SS Ascania* on June 11th and is scheduled to return by air from Amsterdam to New York early in September.

For the fifth consecutive year Hope students will spend approximately eleven weeks in Europe, six weeks of which will be devoted to an intensive academic program in Vienna. Courses announced for 1960 include Art History, Music Literature, History of Europe in the Middle Ages, Recent European Literature, Viennese Drama, and three German Language courses. Students will be able to earn up to six semester hours credit during the Vienna Summer session.

As in previous years, the group will land in France and begin its extended study tour of Western Europe with a series of high level briefings with European political and military leaders in Paris and Bonn. New features of the program this year will be a three day visit to Berlin, and a stop in Oberammergau where the world famous Passion Play will be given this year. On their way to Vienna students will travel through the heart of the glacier world of the Austrian Alps.

During their six weeks in Vienna students will be living in private homes with Austrian families. They will have breakfast in their homes, lunch with the entire group at the Institute of European Studies, and dinner on their own in one of the many excellent Viennese restaurants. They will receive a weekly refund for their dinners.

Concerts, operas, recitals, attendance at plays, visits to art collections, excursions to points of historical interest, and guest lectures by European experts will be part of the regular academic program during the six week session in Vienna. Also included in plans for this period is a mid-term vacation which will take participants to the Salzburg Music Festival. A side trip from Salzburg will include a visit to Berchtesgaden, and through the three thousand year old salt mines at Hallein.

Shortly after arrival in Austria members of the Summer School will meet with American Embassy officials and representatives of the Austrian Government for briefings on current political, economic and social problems. While in Vienna students will also participate in many social activities including those scheduled by the International Student Club, the English Community Church of Vienna, and the Institute of European Studies as well as programs especially

arranged for them by the Hope College Vienna Summer School.

Following the completion of their studies in Vienna students will have two weeks in which they can travel independently to places on their own choice. They will be free to visit relatives, join a European student travel group, or plan their own activities, whether they want to travel "deluxe" or stay in Youth Hostels for forty cents a day.

Those who prefer to take part in an organized travel program will be able to spend ten days on a tour of Italy under the expert guidance of the art instructor of the Vienna Summer School. This optional Italian tour will include Venice, Florence and Rome. The group will reach Rome in time to attend the opening of the 1960 Olympic Games.

The cost of the 1960 Vienna School program is \$965.00. This figure includes travel to Europe by ship and return travel by plane, bus transportation, hotels, meals and admissions during the eighteen days of travel through Western Europe and Berlin, housing and all meals in Vienna during the six weeks session, the mid-term excursion to Salzburg and Berchtesgaden, tuition for up to six semester hours and the cost of all field trips arranged for courses in which the student is enrolled.

Not included in the price is: travel in the United States, expenses in Europe during the period of independent travel, and personal expenditures. The cost of the optional Italian tour is \$130.00. Students not regularly enrolled at Hope College will have to pay a \$10.00 registration fee.

Announcements of the Vienna Summer School program and application forms may be obtained from the office of the Dean of Students or by writing to Dr. Paul G. Fried, Director, Vienna Summer School, Hope College, Holland, Michigan.

HISTORY AND POLITICAL SCIENCE GIVEN SEPARATE STATUS

Dr. Paul Fried, associate professor of history and director of the Vienna Summer School, was appointed head of the History Department in December.

Dr. J. Dyke Van Putten will be head of the Political Science Department. The two departments were formerly combined and known as the History and Political Science department and were headed by Dr. Van Putten.

"With the growth in the size of the college and a significant increase in interest in political science as a major area of study, the decision was made to separate the combined departments and to have each become a separate department," Dr. Lubbers said in announcing the change.



Dr. Henry Kuizenga

SPIRITUAL LIFE SPEAKER

Dr. Henry Kuizenga '35 was the guest pastor for Hope's annual Spiritual Life Week (formerly known as Religious Emphasis Week and prior to that, Prayer Week), November 8-12.

Using as his subject for the week "Who Communicates with God?", Dr. Kuizenga in well received Chapel sermons, afternoon seminars, dormitory devotions and a closing communion service, expanded his general topic. Sharon Van't Kerkhoff, Phoenix, Ariz., and John Kleinhessel, Holland, were the seniors in charge of the week.

Dr. Kuizenga is pastor of the First Presbyterian Church of Ann Arbor. His church serves a parish of 2200 communicants and from 600 to 800 university students.

A native of Holland, Dr. Kuizenga received his bachelor and master degrees in theology from Princeton Seminary and the doctor of philosophy degree from Yale University. He has served as Director of Christian Education at the Prospect Presbyterian Church, Maplewood, N.J., and as pastor of the Brick Church of East Orange, N.J. He was a Chaplain for the Air Forces for three years during World War II, and dean of men and associate professor of Bible at Carroll College for two years. He has been a member of the Board of Trustees of Princeton Theological Seminary since 1957. At present he is also a frequent contributor to "The Pulpit," a journal of modern preaching, and president of the Ann Arbor-Washtenaw Council of Churches.



Dr. Everett T. Welmers

Centuries of groping toward the conquest of space have resulted in breaking the barrier of orbital flight. Maneuverability in space at the will of a crew is the next challenge. The nature of the vehicle proposed is a glider with a large rocket engine.

Space Applications for Rocket Vehicles

EVERETT T. WELMERS, AFAS

Bell Aircraft Corporation

Reprinted from *Aero/Space Engineering*—September 1959

As THE second year of the Space age draws to a close, the imaginations of mankind, as well as the vehicles men have produced, are firmly planted in the heavens. Eleven moons have successfully been launched; four of these satellites are still tracing out their elliptical orbits every two hours. Two vehicles have escaped the gravitational field of the Earth and assumed paths about the sun—the first man-made planets. The unprecedented power of rocket boosters, coupled with a precision of control rarely required under laboratory conditions, has enabled the Soviet Union and the United States to reach out into space with vehicles of different configurations for various purposes.

The successes so far attained have answered many questions and satisfied many ambitions. But they also have raised many more problems and encouraged magnificently imaginative plans, previously considered only impossible dreams. Vehicles have been given specific assignments to report on conditions in whatever orbit they were placed. The data returned have been significant, though very limited. The space paths swept out were usually sufficiently close to those intended—at least when orbit was attained—so that instrumentation was appropriate. But all have been characterized by a very brief period of active flight path control compared to the total duration of significant flight time. Space vehicles to date have been more like artillery shells, subjected to guidance only when inside the gun, rather than like aircraft or active target-seeking missiles, controlled for their entire life. Although rockets are uniquely independent of atmospheric oxidizers, rapid release of enormous energy and light weight have been equally useful properties. The ability to maneuver in space and to rendezvous with another space object is essential to the conquest of space. Modification of the radius and plane of the orbit, as well as attitude changes of the vehicle itself, are required. The critical interceptions between the vehicle and the Earth, as well as possible landings on Mars and Venus, suggest exploitation of the atmosphere where available. A

rocket vehicle possessing both space and aerodynamic maneuverability becomes a practical device for repetitive and purposeful missions. This seems an appropriate and rapidly attainable goal—man in space, under man's control, doing what man desires.

Historical Background

Ancient

As might have been expected, the earliest conceptions of space vehicles involved attempts to apply physical principles appropriate only to the Earth and its atmosphere. Icarus reportedly flew so close to the sun that his wing structure melted—but the ineffectiveness of such propulsive surfaces at high altitudes was not suspected. Balloons which could rise to reach the moon were proposed, without anticipating the rapid reduction of atmospheric density. Lukian, about 160 A.D., described trips to the moon, in one case propelled by a whirlwind and, in another, flying with bird's wings. Eagles tied to a platform formed the space vehicle of Regiomontanus—an ineffective attempt to harness masters of the sky to a simple airframe. Cyrano de Bergerac, in 1649, published *A Trip to the Moon*, in which a variety of vehicles and methods of propulsion are described, only one of which has any physical soundness. In the play by Rostand, Cyrano describes six unique ways of "violating the virgin skies" (then claims he used a seventh). The most "scientific" is the third:

"After jumping off like a grasshopper on steel springs, I could, by successive explosions of gunpowder, hurl myself into the blue meadows where the stars are feeding."

Jules Verne, in *From the Earth to the Moon*,¹ described not only a vehicle, propulsion system, and passenger compartments, but also the velocity required and the orbit which must be attained.

Modern

Even though such imaginative exercises did not contribute directly to scientific progress, they have been continually significant as sources of ideas and challenges to action. Concepts based on firm physical principles, coupled with an appreciation of the problems of realization, became significant at the beginning of the 20th Century. As early as 1895, Konstantin E. Tsiolkovskii (1857-1935) discussed artificial satellites, and in 1903 published *Investigation of World Spaces by Reactive Instruments*.^{2, 3} Although the work of Goddard⁴ and that of

Dr. Welmers is a graduate of Hope College and received M.A. and Ph.D. degrees in Mathematics from the University of Michigan. During the last 15 years at Bell Aircraft, his activities have included flight test engineering, flutter and vibration, data reduction and analysis, mathematical computations, operations analysis, mathematical research, advanced design, and reliability. He has been Chief of Dynamics, Manager of Advanced Analysis, and Assistant to the President. At the present time, he is Director of Plans and Programs.

German rocket enthusiasts two decades later was primarily oriented toward solving engineering problems, proving that rocket engines would actually operate, the unique application to space propulsion was always a goal.

Attempts to find a "breakthrough" for the problem of long-range bombing led Saenger and Bredt to studies of rocket-boosted gliders.^{5, 6} Much of the interest in their work is due to the re-entry problem; a skip-glide path was suggested for the reduction of kinetic energy without continuous aerodynamic heating. As an extension of the V-2 developments, a group at Peenemünde designed and tested a rocket-glider, the A-9, again for the purpose of extending bombing ranges.⁷

Russian interest in vehicles of this type is based partially on the same long-range bomber concern. However, a paper by Shternfeld in 1954 on *Problems of Cosmic Flight*⁸ discussed rocket-propelled space vehicles and proposed that gliding flight be used for landing on the Earth, Mars, or Venus.

In the United States, a continuation of the Peenemünde work has led to proposals for commercial and military applications of rocket-boosted gliders by Dr. Walter Dornberger. A careful analysis of the efficiency of such vehicles for very long-range terrestrial applications has been made by R. Corning,⁹ with the conclusion that the rocket-propelled airplane can be an economical form of transportation.

Vehicle Requirements

Many applications of satellites and space probes do not require a human crew. However, although man could throw a stone, shoot an arrow, or fire a shell, he was not satisfied until he had a device in which he, himself, could move through the atmosphere. This situation will or even now does exist regarding space. Whether spacecraft are used in scientific or military roles, a manned vehicle is essential for servicing or inspecting unmanned space stations, for a space station itself, as a shuttle between Earth and manned satellites, or for exploring far regions of space.

Repetitive Landing and Take Off

Such an operational concept of a rocket vehicle in space implies repetitive usage. The inaccessibility or unfriendly environment of much of the Earth's surface emphasizes the desirability of landing at a predesignated base. If appropriate techniques for ejection from orbit are available, purely ballistic flight can give general area accuracy.¹⁰ Precise touchdown can be most easily accomplished by utilizing aerodynamic control under dictates of an automatic landing system. Aerodynamic maneuvering forces would be trivial (0.01g) at 300,000 ft.; effectivity at 80,000 ft. would be significant, 1/3g; below 65,000 ft. more than 2.5g would be available, leading to structural and other limitations on control, rather than aerodynamic.

A glider-type vehicle is also desirable in making contact with other planets possessing atmosphere. Re-entry into the atmosphere of Venus where surface density is approximately 13 times that of the Earth would be similar to that of the Earth. Mars, with 1/13th the atmospheric density at the surface, will present lower decelerations and lower heating rates. Gazley¹⁰ has discussed the general problem of planetary atmospheric re-entry.

An "escape" rocket, powerful enough to eject the vehicle from a malfunctioning booster system at or near take-off, is desirable, both for pilot safety and for repetitive use of the airframe. The same rocket could be used for the major maneuvering requirements in space.

Variation of Orbital Plane

Assuming that a vehicle has been placed into orbit, aspects of maneuverability can be considered separately, even though combinations of these will usually be applied simultaneously.

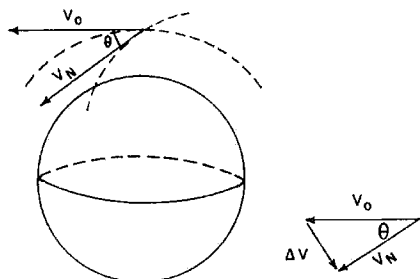


Fig. 1. Change of orbit plane.

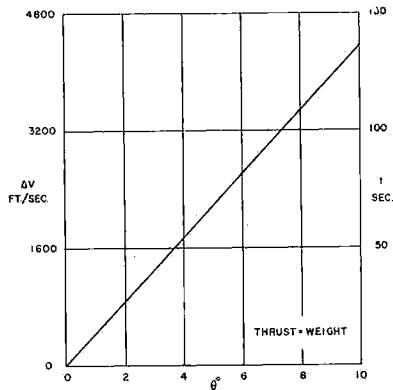


Fig. 2. Velocity increment and time required for change in orbital plane.

For variations of the orbital plane, the velocity vector must alter direction without change of length. Then, as in Fig. 1,

$$\Delta V = V_N - V_0$$

$$|\Delta V| = 2 |V_0| \sin \theta/2, |V_N| = |V_0|$$

Obviously, a 60° shift requires a velocity increment equal to the original velocity, and a 180° change requires double. If orbital velocity is 25,000 ft./sec., the $|\Delta V|$ required for orbital plane change of θ is shown in Fig. 2. If thrust along ΔV is equal to vehicle weight, the time required to attain the new velocity is shown as the right ordinate. Precision launching is clearly necessary since variations of more than 5° will require placing very large propellant loads into orbit.

Variation of Orbital Radii

Variation in the size or shape of the orbit involves changes in total energy, kinetic plus potential, and in the period of revolution. If E is the total energy per unit mass with respect to a state of rest on the Earth's surface, this dependence on orbit geometry can be expressed as:

$$E = (\lambda/r_0) - [\lambda/(r_a + r_p)]$$

here r_a and r_p are lengths of the radius vectors at apogee and perigee, r_0 is the radius of the Earth, and

$$\lambda = g_0 r_0^2 = 14.059 \times 10^{16} \text{ ft.}^2/\text{sec.}^2$$

A circular orbit at the Earth's surface results in

$$E = (\lambda/r_0) - (\lambda/2r_0) = \lambda/2r_0 = 336 \times 10^6 \text{ ft.}^2/\text{sec.}^2$$

The energy required for escape from the gravitational field of the Earth is

$$E = \lambda/r_0 = 672 \times 10^6 \text{ ft.}^2/\text{sec.}^2$$

since $r_a + r_p$ is then infinite.

For convenience, the altitudes, h_a and h_p , above the Earth's surface may be used:

$$r_a + r_p = h_a + h_p + 2r_0$$

Fig. 3 shows total energy E and period P plotted relative to the sum of these altitudes, $h_a + h_p$. (Note that E scale increases downwards.)

Differentiating E with respect to an orbital radius,

$$dE/dr = \lambda/(r_a + r_p)^2$$

Evaluating at the Earth's surface (where $E = 336$), eight energy units per unit of mass are required for each foot change in orbital radius, increasing as radii increase. At the required altitude for a 24 hour satellite, 22,400 miles, $E = 621 \times 10^6$, 85 per cent more than for a surface orbit, but $dE/dr = 0.18$. So small an energy change per ft. change in orbit radius is likely to be balanced by much larger errors in orbit dimensions at such great distances.

Variation of Attitude

Attitude control is intended to accomplish two tasks. The first defines the application of other forces by rotating the vehicle in the appropriate direction. A fixed rocket thrust can then be used for changing orbit plane and adding or subtracting energy to modify orbit geometry. Also, the aerodynamic forces involved in re-entry can be properly applied before aerodynamic surfaces can be used. The second task is orientation of the vehicle in order to accomplish specific missions, such as presenting the proper surface to a satellite being overtaken, directing instruments toward desired phenomena, or accepting interchange of men and material in space.

Considerable experience with such systems exists, including the X-1-B research airplane and VTOL craft. A typical system could consist of small rockets using hydrogen peroxide as a mono-propellant, decomposed upon contact with a silver catalyst bed. For 90 per cent, H_2O_2 , a specific impulse of 160 sec. at infinite altitude is attainable with 200 psia chamber pressure; this rises to 180 sec. with 99 per cent concentration. Fig. 4 indicates the relation between total impulse and system weight, including the H_2O_2 tank, a helium pressurization tank, and nozzles with an area ratio of 12. Higher thrust levels or more nozzles add about 3 lbs. per 100 lbs. of thrust. On-off, proportional, or more sophisticated variants of control have been designed. Total impulse requirements for a space vehicle depend on maneuvering requirements and duration aloft, but values in the upper-right quadrant of Fig. 4 will likely be applicable.

Problems of Significance

A vehicle satisfying the requirements described can be designed to give a configuration as depicted by the front cover

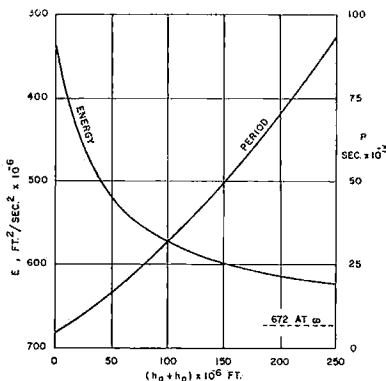


Fig. 3. Relation of orbit size to period and energy per unit mass.

of this issue of *AERO/SPACE ENGINEERING*. However, the road to realization of such a concept is obstructed by numerous problems of particular significance. A few will be described briefly.

Launching

Programs for large boosters are already in progress, giving hardware appropriate to the vehicle under discussion. If the space vehicle is originally designed with large tanks for extensive maneuvering, first flights can be made with small amounts of propellants, increasing as booster thrusts rise. Thus, missions can expand without change of the basic spacecraft. Reliability of boosters when men are in upper stages will continue to be a most critical problem. If repetitive flights are to be made, costs become serious; for first stages, more emphasis must be placed on low cost propellants, and perhaps recoverable cases, than on high specific impulses.

Environment

Most environmental problems for both crew and equipment will already have been studied by satellites, probes, and projects such as Mercury. Complete flexibility regarding the

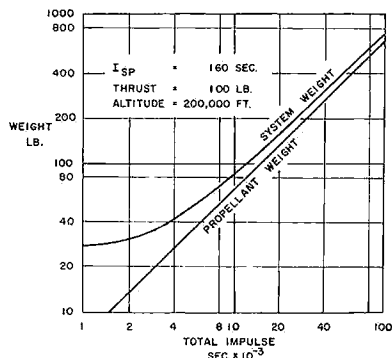


Fig. 4. Reaction controls—weights of H_2O_2 system for total impulse requirements.

radiation bands is not as yet possible; shielding may be required or techniques may be found to avoid the most critical regions through choice of launch point and orbit. Problems of food and oxygen for the crew are not as serious as in a permanent manned station, but these may form significant cargoes on supply missions. The crew must be able to carry out a mission in comfort, or the advantage of the human element will vanish.

Propulsion

A rocket engine for maneuvering in space poses a challenge. It must be restartable, have a very high specific impulse and low weight, must be accurately controlled, and variable thrust would be desirable—in fact, it should be the ideal rocket engine. Exotic propellants, such as fluorine or new chemicals created for this specific purpose, are desirable. Refinements here justify high costs.

Navigation

Experience with the construction and launching of unmanned satellites can be expected to improve the accuracy of injection into orbit. Maneuverability in space can, of course, simplify the problem of precisely attaining an original orbit, but only at the expense of energy available for other maneuvers. Attainment of precision paths will likely be an early application of maneuverable space vehicles.

Determination of satellite orbits from the Earth can be accomplished with accuracy if enough observations can be made. Calculation of exact transfer ellipses between orbits has been carried out only for simple cases; but solution of the intercept problem will require exactly this. If basic information on the orbit of the target is available from the Earth, closure must still be accomplished by the vehicle, at least in its finer aspects. Precise directing of rocket thrust by pointing the vehicle not only requires accurate and stable references, but also cannot depend on complete control from hundreds of miles away. Techniques have been discussed, systems are being constructed, but a major problem area still exists in space navigation for predesignated orbits or intercept.

Data Processing

In addition to data processing equipment for navigation, added capacity should be available for other purposes, such as environmental control, recording of data, etc. The successes recently attained in packaging digital computers in extremely small sizes indicate that only adaptation and optimal exploitation of known techniques will be required.

Re-Entry

So much has been written regarding re-entry that it is unnecessary to discuss it in detail.¹⁰ The problem remains that of opening up a corridor within which the vehicle can fly without exceeding temperature and deceleration limits. Whether cooled surfaces, double-wall construction, ablation, or heat resistant structure carries the load of widening the corridor, or properties of all are used, is a matter of design concept and technical courage. At present, a double-wall

structure, in which the outer skin is at high temperature, and therefore radiates efficiently, and an inner skin is cooled, seems capable of permitting sufficient flexibility along the re-entry trajectory.

Additional properties of the atmosphere on Mars and Venus will be desirable before entry there can be attempted. This can be attained through unmanned probes or by manned vehicles skirting those planets with enough energy to break away back to Earth. Although we do not understand all details of re-entry into our own atmosphere, enough information is at hand to try.

Conclusions

The appropriate and eventual space application for rocket vehicles is believed to be a manned space glider. Essential characteristics are:

(1) Reaction controls for attitude and vehicle thrust orientation.

(2) A rocket engine with thrust in excess of weight for safety during launch and boost, and for orbit size and plane changes.

(3) An appropriate environment in which a crew can accomplish significant tasks and obtain significant information.

(4) Use of aerodynamic forces during the critical and repetitive phase of re-entry and landing.

(5) A goal of maneuverability in space for whatever purpose it may be used—in particular, the capability for interception of satellites.

Such a vehicle not only fulfills many of the dreams of space enthusiasts, but actually is feasible in light of the technological stature we have attained.

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- ⁹ Allen, H. Julian, and Eggers, A. J., Jr., *A Study of the Motion and Aerodynamic Heating of Ballistic Missiles Entering the Earth's Atmosphere at High Supersonic Speeds*, NACA Rep. 1381, 1958.
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WELMERS SELECTED FOR ARPA ASSIGNMENT

Dr. Everett T. Welmers was selected to work with the Department of Defense Advanced Research Projects Agency on special space projects in September.

Everett has been granted a one-year leave of absence from Bell Aircraft and is with the federal agency in the Pentagon working in the areas of ballistic missile defense and space technology. He was selected by the chief ARPA scientist, Dr. George Sutton. ARPA has been assigned the responsibility

of directing the development of space vehicles and ballistic missiles for the Department of Defense.

Everett has formerly been a member of several study groups for the Department of Defense and recently was named to the Air Training Advisory Board of the U.S. Air Force by Lt. Gen. Frederick Smith, commanding general of the Air Training Command. He also has been a professorial lecturer at Millard Fillmore College, University of Buffalo, since 1945, teaching graduate courses in pure and applied mathematics.

ALUMNI CLUB MEETINGS

South Chicago and Suburban

Culminating inquiries and plans started over a year ago by Gerald and Delores Crooks Decker, both '53, a South Chicago and Suburban Club was organized on September 25. Thirty interested area Hope people attended an informal evening meeting held in the Emanuel Reformed Church in Roseland.

Phyllis Sherman Booi '50 of Harvey sang two lovely solos accompanied by her aunt, Mrs. Benemsa. The rest of the program was a short resume concerning the situation at Hope College, fall 1959, and slides and tape of the first Academic Homecoming, fall 1958, presented by alumni secretary Marian A. Stryker.

In the short business meeting the group enthusiastically requested organization. Edith Teune Pals '53 was elected president; Anne Visser '59, vice president.

Those attending: Duane Booi '49, Phyllis Booi '50, Anne Kloese Benemsa '51N, Howard De Young '29N and Mrs. De Young, Howard Meyer '52, Gerrit Hook '57, John Golds '38, Gerald and Edith Pals, Vivian Anderson '59, Anne Visser '59, Tonetta Teninga Chapman '21, Adrienne Hammekool Boomker '14, Peter De Graaf '25 and Mrs. De Graaf, Maurice '45 and Virginia Hemmes '48 Laug, Robert Schultz '50N, George Schultz, '51N, Anne Wyngarden Burger '48, Chester Toren '41, Milton '54N and Shirley De Young '55N Rievel, Ted and Ethel Groenveld Earle '55, Theodore Zandstra '41, Gerald and Delores Decker.

Muskegon Club

Evening meeting Monday, February 1, 1960, 8:00 P.M.

Central Reformed Church
Program: Education

Speaker: Dr. Robert De Haan, Head of Psychology Department, Hope College

The Muskegon Alumni Club opened the year with a very successful meeting on November 9 in Covenant Reformed Church. Fifty-two members attended the unplanned potluck dinner.

Dr. Robert N. Boelkins, president, introduced Dr. Paul Fried, Director of the Vienna Summer School, who spoke to the group on the subject "Hope Promotes World Understanding." Two students who had participated in the Vienna Summer School talked about their experiences: Charles Lemmen, Holland senior, and Justine Dakin, sophomore from Keene, N.H.

New York City Club

Dinner meeting on Friday,
March 25, 1960

Grove Reformed Church,
North Bergen, N.J.

Grand Rapids Club

Evening meeting Friday,
January 22, 8:00 P.M.

Detroit Club

Dinner meeting Friday, January 29, 1960
First Presbyterian Church of Royal Oak

Speaker: Dr. John W. Hollenbach,
Vice President of Hope College

HOPE RECEIVES GRANTS

Hope College received a \$2,000 unrestricted grant from the Esso Education Foundation in November.

This year the Foundation announced 363 grants totaling \$1,466,500 to 330 institutions. This brings to nearly \$7,500,000 the total amount granted by the Foundation in its five year existence to privately-supported colleges in the United States.

Dr. Lubbers said the Hope grant will be added to the Faculty Summer Study Grant fund.

In December the college was the recipient of a grant of \$1,500 from Texaco Inc. for the academic year 1959-60, without stipulation for its use. Hope College is one of more than 200 colleges and universities included in Texaco's program of educational support. In addition to providing direct financial assistance to 140 privately financed schools, the program includes scholarship and fellowship assistance for approximately 300 men at more than 80 educational institutions, both private and tax supported.

Dr. Lubbers said the Texaco grant will be put into a fund for faculty participation in professional conferences.

The Research Board of the Ciba Pharmaceutical Company, Summit, N. J., has presented a \$500 grant to the Hope College Biology Department. The grant will be used to support an undergraduate biology student, part of whose time will be spent working on Dr. Philip G. Crook's (Associate Professor of Biology) research project.

.....
A Hope College Breakfast will be held in connection with the convention of the American Association of School Administrators in Atlantic City, New Jersey, February 13 to 17.

The Breakfast will be held on Monday morning February 15 at the Claridge Hotel—West Room at 8:00 A.M. All Hope College people in attendance are invited to attend. This announcement is made by Melvin Lubbers '27.

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MRS. WALTERS RETIRES

Mrs. F. E. Walters, secretary to Admissions Director Albert Timmer since 1945, retired from her position on November 21.

During her 14 years in the admissions office, Mrs. Walters has handled correspondence and credentials for approximately 5,000 Hope men and Hope women. These young people and their families, in almost every case, have at sometime enjoyed Mrs. Walters' gracious hospitality.

President Lubbers has often referred to Mrs. Walters as an example of an employee dedicated to Hope College. She joined the staff just a few months after Dr. Lubbers did, and like him has seen the enrollment rise from 700 in 1945 to 1384 at the present time.

Mrs. Walters has had a wide experience in business. She was for many years a secretary for the Kemper Insurance Co. in Chicago and for another period of time was a secretary in the Public Health Division of Johns Hopkins University. She and her late husband taught in an Ohio business school and handled a sales agency for office equipment.

A member of Hope Church during her residence in Holland, Mrs. Walters has been active in its Women's Club and served for several years as the church's representative in the Resthaven Guild. She has just concluded a three-year term as the Guild's chairman of the monthly birthday program.

As for the future, Mrs. Walters says after a brief rest she will start on a long agenda of things she has always wanted to do.

In the picture, Marian Stryker '31, a colleague of Mrs. Walters in the work of Hope College for the past 12 years, presented a purse offered by her co-workers on the first floor of Van Raalte Hall and a few friends, to Mrs. Walters at a "retirement" party in her honor at the home of Dr. and Mrs. Lubbers. Dr. Lubbers and Mr. Timmer witnessed closely the presentation.



Dr. Lambertus Hekhuis

DR. HEKHUIS RETIRES

Dr. Lambertus Hekhuis '13 retired in June from his position on the University of Wichita faculty. At the time of his retirement he was dean of the Fairmount College of Liberal Arts and Sciences and head of the departments of philosophy and religious education.

A native of Spring Lake, Dr. Hekhuis attended elementary school in Chicago. He took his secondary education at Hope Preparatory School. At Hope he participated in oratory, dramatics and basketball, winning two varsity letters in the latter.

In 1916 Western Seminary conferred the master of arts degree upon him and in 1925 he received a bachelor of divinity degree and a doctor of philosophy degree magna cum laude from the University of Chicago.

Dr. Hekhuis did his first teaching in an elementary school at Overisel, 1908 to 1910. He resumed it as principal of Voorhees College in Vellore, India, in 1917 where he remained until 1924. He also served as a commissioner in the global Boy Scout movement in Vellore.

Joining the University of Wichita faculty in 1926, he completed thirty-three years on the staff. He was active in Boy Scout work in the Wichita area and was awarded the Silver Beaver Award.

Dr. Hekhuis is listed in Who's Who in America, in Education, in Philosophy and in Religion. He was a member of many professional societies including the YMCA, Religious Education Association and others.

Sportwise he participates in tennis, golf, softball, badminton; his hobbies

include photography, gardening, travel and the umpiring of sandlot baseball.

He and Mrs. Hekhuis, his Hope classmate Jennie Immink, are now living at 16 Birch Ave., Corte Madera, Calif., where they are "enjoying the new location and the new privileges and opportunities of this area of our country."

ADVANCED DEGREES

Keith Van Koeveering '57, B.S. in Printing Management, Carnegie Inst. of Tech., June 8, 1959.

Paul Van Koeveering '57, Printing Mgt., Carnegie Inst. of Tech., June 8, 1959.

Calvin P. Langejans '58, M.S. Music Ed., U. of Mich., June, 1959.

Betty Cross '52, M.A. Special Ed., M.S.U., 1958.

Donald J. Barkel '56, M.S., Mech. Eng., Mich. College of Mining and Tech., June 1959.

Paul M. Thompson '50, M.A., history, U. of Mich., August 1958.

WEDDINGS

Matie Fischer '59 and Earle Wells Watts, October 3, Muskegon.

Herbert Morgan '55 and Joan K. McAnelly, July 11, Des Moines, Ia.

Carl Ver Beek and Sandra Dressel, both '59, August 25, Holland.

Arthur Bieri '56 and Janet Groenewold '59N, October 24, Cicero, Ill.

David L. Huff '55 and Carole Kapral, September 19, Boonton, N.J.

Sheryl V. Yntema '58 and Arthur E. Tusch, December 19, Grand Rapids, Mich.

Robert H. Fortiner '55 and Priscilla Ann Tallman, December 26, Rochester, N. Y.

Richard J. Kelly '58 and Edna Mae Wagner '60, December 26, Schenectady, N. Y.

Lawrence H. De Witt '56 and Ruth E. Wright '58, December 27, Berne, N. Y.

"We believe that the Christian college must come to the student with the stamp of refinement, art and culture. God works that way. He does not merely allow the sun to set, but he paints the sunset in glorious beauty."

We must open to them (students) this vast cosmorama and let them see something of what God has placed before them, that the feeling of admiration and reverence may mingle with their acquisitions."

(Inaugural address 1931.)
Wynand Withers '09.



NOORDHOFFS GO TO TAIWAN

"A fair exchange" has been made at Mackay Memorial Hospital in Taipei, Taiwan. Dr. M. Samuel Noordhoff '50 left the United States in September to take up the work of Dr. Clarence Holleman '14 who is retiring in January.

Dr. and Mrs. Noordhoff (Lucille Brunsting '49) and their two children, Nancy, 3 and Sammy, 1½, left Grand Rapids in July to attend Outgoing Missionary school in Meadville, Pennsylvania. After vacationing with parents and grandparents in Iowa, Mr. and Mrs. Henry Noordhoff, Orange City, and Mr. and Mrs. A. H. Brunsting, Hull, they sailed from San Francisco on September 2.

Dr. Noordhoff received his M.D. from the University of Iowa Medical School in 1954. He spent the last five years in Grand Rapids completing his internship and residency in surgery at Butterworth

Alumni

Hospital. Mrs. Brunsting formerly taught English in LaMars, Norway, Iowa City, Iowa, and in Grand Rapids Christian high schools.

News concerning Dr. Holleman's desire to retire reached Dr. Noordhoff during his last six months residency. Correspondence with Dr. Holleman was the means through which Dr. Noordhoff decided to enter practice as a missionary doctor.

Dr. Holleman will leave Taiwan in January and after a leisurely trip will return to the United States.

The Noordhoffs' address: Mackay Memorial Hospital, Taipei, Taiwan.



Andrew Lampen

At the October 17 (Homecoming) meeting of the board of directors, Alumni Association, two directors-at-large were elected. Andrew Lampen '37 was named to succeed Helen Silber '29 for the western area of the nation for a three-year term. John D. Colby '37 was elected to fill the unexpired term of John Somers for the eastern section.

Andrew Lampen is president of the Federal Intermediate Credit Bank of St. Paul. Since January 1, 1957 when he took office, this bank has experienced exploding growth — 100% increase in volume.

NEW DIRECTORS ELECTED TO ALUMNI BOARD

A native of Beaverton, Michigan, Andrew began his career in 1937 with a few months work with the Grand Rapids Press. From there he went to the Grand Rapids Production Credit Association as clerical assistant advancing to field assistant to secretary-treasurer. He went to St. Paul as vice-president of the Production Credit Corporation of St. Paul in 1954 and was president of the corporation when it merged with the Federal Intermediate Credit Bank in 1957. This bank supervises the activities of production credit association in Michigan, Minnesota, North Dakota and Wisconsin.

Andrew and Mrs. Lampen, nee Lillian Van Raalte '37, have two foster sons, "Butch," 12 and "Preston," 14. They live at 1699 South Victoria Road, St. Paul.

John Colby lives at 5403 Barbee Street, McLean, Virginia, where he is concerned with staff development training programs for commissioned officers and civilian employees of the Public Health Service, Department of Health, Education and Welfare.

He has a master of arts degree from New York State Teachers' College, Albany, (1942). Beginning his career as a class room teacher in Waterford, N.Y., he continued as director of guidance in Ogdensburg, until he entered military service in 1943. During two years of service he was stationed in Iran, Egypt and Libya.

John was first employed by the federal government in 1946 in the education and



John Colby

rehabilitation program of the Veterans' Administration in Syracuse. He transferred to the Department of Labor in Washington, D.C. as chief of vocational information and rehabilitation services for civilian employees of the federal government disabled on the job, in 1951. Later he moved to the Department of Health, Education and Welfare, office of Vocational Rehabilitation and from there to the Public Health Service.

Mrs. Colby is the former Ruth Malefyt '37. There are three Colby children, Craig, 17, Eric, 15, and Carolyn, 13.

Ernest '49 and Geraldine Uppleger, '48 Meeusen, Thomas John, April 13, 1959, Jackson.

Jack '51 and Wilma Boeskool, Karla Edith, July 30, 1959, Coopersville.

C. Howard and Norma Hoffman '52 Richardson, Gregory Paul, September 27, Moline, Ill.

Robert '53 and Louise Loula '52N Ondra, Carol Ann, October 4, Palmyra, N.Y.

Fred and Joyce Baker Brieve, both '50, Elizabeth Ann (6 weeks old) adopted August 8, North Muskegon.

Charles '53 and Marian Dykstra, Sally Kathleen, May 2, 1959, Ludington, Mich.

Edward J. '49 and Ruth Koop '48 Yeomans, Jacqueline Ruth, November 26, 1958.

Carl '53 and Meryl Gowens '56 Van Farowe, Cynthia Kay, September 19, Southgate, Mich.

Lamont and Ruth De Graaf Dirkse, both '50, Nancy Ann, May 20, 1959, Grand Haven.

Peter M. '57N and Carole Estroe '55 Bakker, Marie Alison, February 2, 1957 and Jennifer Elizabeth, September 27, 1959, North Canton, Conn.

Edwin '56 and Betty Coon, Carol Jean, October 2, Bronxville, N.Y.

Roger '50 and Barbara Hendricks, Timothy Jay, October 31, Royal Oak.

Earl and Ella Roggen '33 Tellman, David Earl, October 29, Holland.

Lynn '56 and Phyllis De Weerd, '54N Post, Matthew Lynn, July 15, 1959 and William Dean, March 27, 1957, Grand Rapids.

Willard '55 and Joyce Vanderborgh '55 Rink, Peter Christopher, May 5, Grand Rapids.

Forrest W. '53 and Jane De Jong Van Oss, Joel F., July 19, 1959, Jamestown.

George '50 and Marian Riekse '51N, Steven George, October 27, E. Lansing.

Alden '50 and Mrs. Stoner, Jayne Helen, November 4, Holland.

(Continued on Page 21)

he News

CORRECTION

In the article concerning Justin Vander Kolk '31 on page 6 in the October issue: Justin's daughter Marilyn did not matriculate at Hope nor is she married. The Marilyn on our alumni list is the daughter of Dick Van Der Kolk '28 of Grand Haven. Please excuse.

BIRTH ANNOUNCEMENTS

Benjamin '55 and Nancy Dodd Le Fevre, Stephen Benjamin, August 23, New Brunswick, N.J.

Ronald J. and Mrs. De Graw, David John, September 20, Marshall.

1906

The John C. Hoeckje residence for more than 400 men at Western Michigan University was dedicated on November 7. Mr. Hoeckje was a member of the Western Michigan staff from 1916 until his retirement in 1955. He died in January, 1959.

1924

Jacob Prins is the author of the meditation for December 5 in *The Upper Room*. This publication is a devotional guide used by an estimated eleven million people around the world.

1928

Dr. Alfred M. Popma, radiologist and vice chairman of the Western Interstate Commission for Higher Education, reported the findings of a three-year study of the medical manpower needs for the west to a conference of governors and their staffs in Sun Valley in September.



In his report Dr. Popma noted that the western states, including Alaska and Hawaii, have a compact whereby states without medical education facilities are able to share such facilities in the states that do. He said this year 300 students from the "havenot" states are attending professional schools (medicine, veterinary and dental) in other states under the arrangement. The gist of Dr. Popma's report, according to a Boise Newspaper report, was that it is imperative that existing western medical schools (there are nine of them) expand their facilities to meet the ever increasing demands for additional physicians and surgeons.

The Commission estimates that by 1975 the West's population will increase by 70 per cent and that 55,000 physicians will be needed to meet the demands of that population.

1931

Betty Smith Becker was honored on November 2 by the Holland Junior Welfare League. The program, for the benefit of new members of the League, was a dramatization "This Is



Your Life, Betty Becker." Since Betty was one of the founders of the League and has given the "most" to the organization, she was accorded the honor. Her many efforts were extolled as a stimulus to the new members. Beginning with her life in Holland, her student days at Hope College recounted by the

CLASS NOTES

other "half-pint" Marian Stryker, the master of ceremonies presented her "life" right through her 50th birthday in May. The program was complete with the presentation of a jumbo charm bracelet and a scrapbook of her life prepared by League member Mollie Buttles Baker '32. Hope "girls" taking part in the dramatization were: Sady Grace Masselink Winter, Carol Van Hartesveldt Van Potten '26, Dorothy Vander Schel Japina '30, Eunice Hyma Bos, Ruth Bolhuis Cook, Velda Blair Van Hartesveldt '32, Peggy Prins De Haan '49. Finale of the "drama" was the entrance of husband, Clarence, and two of the four Becker children, Betsy, 17 and Buzz '16. George, a salesman for Home Furnace Company, and Barbara, a junior at Central Michigan University, could not be present.

1934

Bernard W. Rottschaefer, Ph.D., was appointed Special Projects Coordinator of the Dyestuff & Chemical Division of General Aniline & Film Corporation in October. He was formerly Production Manager of the division's manufacturing operations at Rensselaer, N.Y. His headquarters in his new position will be at 435 Hudson Street, New York, N.Y.

1937

Ekdal J. Buys became president of the board of domestic missions RCA on January 1. He was elected by the board at its fall meeting in Buck Hill Falls, Pa., to succeed Dr. Justin Vander Kolk '31, who is president of New Brunswick Seminary.

1939

J. Roderick Van Leuwen is superintendent of construction and design, F. W. Woolworth Co., Philadelphia, Pa.

1940

Gerard J. Koster has accepted a call to be the missionary-pastor in the establishment of a new church in Babylon, Long Island. Two Reformed churches in Jamaica combined and the monies realized from the sale of the one property are being used for the new church. In appreciation the new church will take the name of the old Jamaica church: St. Paul's Reformed. The Koster son, John, is a choir boy at St. Thomas Church, Fifth Avenue, New York City.

1941

Philip Dykstra, a member of the National Safety Council's home safety staff for four years, has been named its director of home safety. He has been largely responsible for the development of the nationwide Home Safety Inventory, conducted biennially by the Council.

Before joining the organization, he was a health education consultant with the Wisconsin State Board of Health for five years, and director for two years of the health education division. Prior to that he was an instructor in the secondary schools of Oconomowoc, Wisconsin, for seven years.



A veteran of three years' service during World War II with the Navy in the Pacific area, Phil has done graduate work at the Universities of Wisconsin, Minnesota and Marquette.

Mr. and Mrs. Dykstra, two sons and a daughter, live at 6541 W. 166th St., Tinley Park, Ill.

1941

Rev. Albert G. Shiphorst, after a seven year pastorate of the Bryn Mawr Park Presbyterian Church, Yorkers, was called to the First Presbyterian Church of Boca Raton, Florida on May 1. Boca Raton is one of the fastest growing cities on the east coast of Florida. It has grown from 700 to 7,000 in seven years and the rate is growing. Starting from scratch in May, the church has now a temporary church building on a beautiful five and a half acre site.

1942

Dr. John W. Schut, whose story concerning his hereditary condition, ataxia, appeared in the October 1951 Journal Magazine, founded the National Ataxia Foundation in April of 1957 and is Chairman of its Medical Advisory Committee. The foundation is dedicated to find the cause and cure of this crippling, killing ataxia and allied diseases. Research work began in the summer of 1958, concentrating on a study of amino acids in the spinal fluids of ataxic individuals. Gifts and donations to the Foundation may be taken as tax deductions on State and Federal income tax returns, both personal and corporate.

1946

Leonard Sibley has been appointed Research Secretary for the board of Parish Education for the United Lutheran Church in America in Philadelphia. Leonard will be responsible for directing evaluational procedures for this denomination. In his new work he will apply many of the techniques, methods, and findings which he has helped to develop as a member of the Character Research Project Staff. He has held the position of Executive Secretary of CRP for the past six years.

1947

Dick and Nell Ritsema Vriesman have a foster daughter whose physical victories have received wide publicity. Mary Ann was born prematurely on April 8 at Plymouth Hospital, just 15 miles from Sheboygan, Wisconsin. Soon after birth she was subjected to corrective surgery of the tracheoesophageal fistula. After a three and a half hour operation and intensive care in an isolate for a month, which included many applications of artificial respiration, Mary Ann made it. Her care for the next two years will include bimonthly trips to the hospital to have her esophagus dilated. Her remarkable victory in the struggle for life has been attributed, by her many physicians, to TLC (tender loving care). TLC will be continued by her foster mother and father and her foster brother, Brian Vriesman, age 5. She became a part of the Vriesman household on October 19.

1949

Dr. George D. Zuidema has been appointed assistant professor of surgery in the University of Michigan Medical School, effective January 1, by the Regents of the University. He has been chief resident in surgery at Massachusetts General Hospital for the past year.

1950

T. Manford McGee, M.D. received a first award for the most outstanding research paper and work done in the United States by a chief resident on loss of hearing due to the use of streptomycin. The award was presented at the annual convention of the American Academy of Otolologists, Rhinologists and Laryngologists in Chicago on October 12.

Dr. McGee has been appointed to the staff of the Henry Ford Hospital in the department of ear surgery as an otologist.

He and Mrs. McGee, Rovilla Ganote '50, live at 311 N. Rembrandt, Royal Oak, Mich.

1950

Paul M. Thompson has been head of the Reference Library at the East Chicago Public Library since December, 1958.

1952

Fred L. Martin is district manager for the Chevrolet Motor Division in Newton Upper Falls, Mass.

1953

Frederick Vanden Berg has been transferred by the American Sealing Company from Grand Rapids to New York City where he will be assistant divisional manager.

1954

Lt. James W. Van Hoven and wife Marylee Rozeboom '56 were "too close for comfort" to the typhoon that claimed 3,000-5,000 lives in Japan and Korea late in September. They had left Korea and were on their way to Japan on a troop ship when announcement was made of the typhoon known as Vera which hit Japan on September 24. Their ship sailed around the periphery of the typhoon and took five days to make the trip instead of the usual day and a half. They were buffeted by 70-mile-an-hour winds and drenched with torrents of water for three days.

Jim and Marylee have been in the Army for two years, one of them in Korea. Marylee worked as a missionary in Yokohama for eight months before she could join Jim in Korea. They arrived in Grand Rapids on October 7. Jim plans to do graduate work at Princeton seminary starting in January.

1954

Le Roy Nattress accepted a position in Washington last February. Currently he is the Assistant Executive Director for the American Board for Certification in Orthotics and Prosthetics, Inc. and the Educational Director of the American Orthotics and Prosthetics Association. These two groups work with the men who fit and fabricate orthopedic appliances and artificial limbs. Address: 2500 Holman Ave., Silver Spring, Md.

Le Roy received his M.A. in Education—Counseling and Guidance, in September, 1957, from UCLA.

1956

Richard Ten Haken was appointed in October to a newly created post of vice principal in charge of the city school district business office in Watertown, New York. The post is equivalent to that of business manager and incorporates the work of purchasing agent.

1957

David A. Payne is working on his Ph.D. in counseling psychology at MSU.

1958

Nena Lila Mith finished Medical Technology Training at Mount Sinai in June, 1959; took and passed the exam given by the Board of Registry of Medical Technologists in July 1959. She is currently employed in the Chemistry Department of Mount Sinai Hospital, Chicago. Her degree: M.T. (ASCP).

BIRTH ANNOUNCEMENTS

(Continued from Page 19)

Donald B. '53 and Mrs. Hillebrands, Donald Bruce II, October 17, Holland.

Ronald G. '54 and Elizabeth Pryor MacClary, John Randall, October 17, New York, N.Y.

Neurology

Dr. John George Veldhuis, prep 1891, died on September 2 in Winter Haven, Florida, his home since 1944. He was a former Overisel resident.

Kathryn Prakkien Huntley '21N died December 7 in Point Pleasant, N. J., following surgery. She is survived by her husband, Justus; two daughters; a brother, Nicholas '29N; two sisters.

Clayton '49 and Nancy Vyverberg '51 Van Hall, Richard Clayton, October 28, Midland.

Gillette and Betty Bardwell '52, Todd Austin, May 26, 1958 and Peter Guy, August 25, 1959, Rochester, N.Y.

Alan '55 and Mary Jane Adams '56 Dykema, Marianne, April 23, 1959, Lansing.

Donald and Dorothy Skinner Casey '58 Greene, Daniel Lee, November 10, South Haven.

Robert '56 and Marcia Smith '55 De Young, Jane Louise, November 10, Whitehall.

Bernard and Jacqueline Blaauw '53 Draper, Dirk, November 17, Muscat, Arabia.

Maurice, Jr. and Janice Vander Borgh, both '50, Jennifer, November 20, East Orange, N.J.

Paul J. '50 and Doris Prins '50N, Mark Allyn, October 15, Jamestown.

Robert '58 and Ethelyn Weed '59 Tulenko, Carol Jean, November 9, New Brunswick.

Theodore '56 and Shirley Schaafsma '59 Bosch, Theodore Cheres, July 26, Grand Rapids.

Wayne '58 and Joyce Ver Schure '58 Nyboer, Lawrence Scott, July 29, Holland.

Allan '54 and Glennyce Kleis '56 Russcher, Joel Allan, October 15, Grand Rapids.

David '55 and Marjory MacEwan '55 Kempers, David Scott, June 19, Ann Arbor.

Lawrence and Anthonette Van Koevering '40 Wildschut, Ellen Marie, October 1, Zeeland.

Le Roy '54 and Sallie Lawson '52 Nattress, Karen Elizabeth, August 27, Takoma Park, Md.

Eugene '50 and Joyce Mulder '54 Scholten, Nancy Jean, December 5, Holland.

David P. '53 and Helen Howard '54 Hanson, Lora Ellen, December 3, New Brunswick, N. J.

Howard W. and Anita Fischer '51 Gaines, Catherine Louise, October 5, Los Altos, Cal.

Dona Nettinga '26 passed away on September 2 in her home in Dallas, Texas, where she had lived for the past 9 years.

Miss Nettinga had done short-term missionary work in Puerto Rico, Dulce, N.M. and Japan. After her return from Japan she attended the Presbyterian College of Christian Education in Chicago, after which she taught in Pikeville College, Ky., for five years before her retirement in 1950. Among her 5 sisters and two brothers surviving are Catherine '33 and Cathinus '31.

Elizabeth Pieters '17, librarian in Hurley hospital, Flint, died on October 8 in University hospital, Minneapolis.

The daughter of Mrs. Albertus Pieters and the late Dr. Pieters, both class of 1887, Miss Pieters had spent several years of her life in tuberculosis sanatoria. A graduate of the Library School, University of Illinois, she had held positions in Muncie, Indiana, National Archives, Washington, D.C., University Hospital, State University of Iowa, Victor Cullen State Hospital, Maryland and Hurley hospital.

The Rev. James Dykema '10 died at Kirk-side on October 14. A graduate of the Brunswick Seminary, he spent his first two years in the ministry working with Indians in Oklahoma, and New Mexico. The rest of his active ministry was spent serving churches in New Jersey and for two different periods was Chaplain at Valley View Sanatorium, Paterson, N.J.

Nicholas E. Lanning '30, Grand Rapids physician, died unexpectedly at his home on October 17.

He had received his M.D. from Rush Medical School in 1935 and interned at Harper hospital in Detroit before establishing his practice in the Madison Square district, Grand Rapids.

He was a member of the Kent County Medical Society, AMA and the American Academy of General Practice.

He is survived by his wife, Lenore Nykamp '31; two sons, Nicholas E. '59, Richard, and two daughters, Mary and Elizabeth, his father, E. K. Lanning, Color; three sisters and a brother.

Rev. Gerrit Pennings '05 died in his native Orange City of a heart attack on November 2. He was considered an expert linguist in Arabic and a scholar in Islam. He was one of the pioneers in the Arabian mission. Hope College awarded him the doctor of divinity in 1933.

Dr. Pennings is survived by his son, Dr. Alfred Pennings '48, a medical missionary in Arabia.

Helen Hospers Yntema, class of 1930, died in Bronson Hospital, Kalamazoo on November 24, after a long illness.

Surviving are her husband, Otto '29; three daughters, Mrs. Richard Snyder, Mrs. Edward Sutton and Helen Ruth, all of Kalamazoo; five grandchildren, one sister, Ruth Hospers Bohart '32N.

Judson W. Staplecamp, class of 1923, died unexpectedly following a heart attack on November 24, in Kenosha, Wis. He had been an attorney in Kenosha for many years.

He is survived by his wife, Judith; one daughter, Mrs. Dwayne Shauler of Kenosha; two grandchildren, and one sister, Mrs. John A. Dykstra '12, Grand Rapids.

Mrs. Gerrit Dykhuizen, the late Dr. E. D. Dimment's sister and for many years the official hostess of Hope College, died at her home on Christmas Eve at the age of 87. She is survived by two daughters, Geraldine and Adelaide, both '26 with whom she lived and a son, Dr. Harold Dykhuizen '30 of Muskegon.

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